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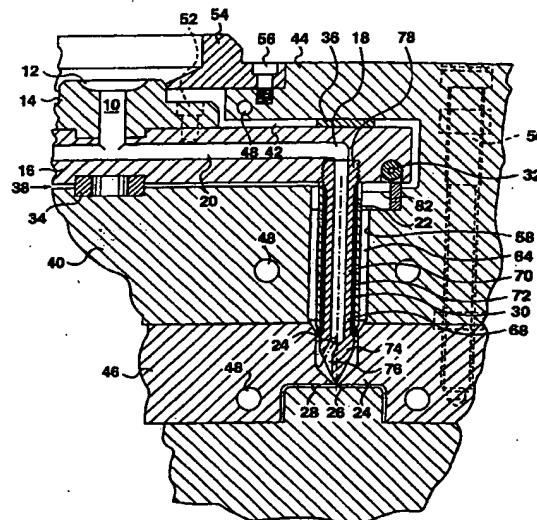
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(54) **Compact cartridge hot runner nozzle having two heaters**

(57) The present invention provides an electrically heated nozzle (22) for injection molding which is insulated to prevent conduction of electricity and loss of thermal transmission to the casing, wherein a first heater (80) and a second heater (90) are in thermal contact with said nozzle. At least a part of the electrical insulation

comprises a layer of dielectric insulator material (84) with an electrical resistance wire heater (80) wound spirally thereabout and another dielectric insulator layer (86) thereover. The first and second insulating layers (84, 86) may be provided by spraying or through telescoping, self-supporting sleeves.



**FIG. 2**

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# EUROPEAN SEARCH REPORT

Application Number  
EP 02 02 7569

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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 21 March 2003	Examiner Alink, M
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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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